Improving Rural Transportation: An Analysis of the Strategies Towards Rural Access and Mobility Project in Osun State, Nigeria

by

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ABSTRACT

This study evaluated the Rural Access and Mobility Project in Osun State with a view to identifying effective strategies for improving rural transportation infrastructure and enhancing community access. The study employed concurrent mixed-method design, while both probability and non-probability sampling procedures were used to select the respondents. A self-designed instrument was used to obtained information from the participants. Mean, standard deviation and correlation analysis were used for data analysis, while the responses from the KII were thematically analysed. The findings revealed that the top strategies for effective implementation of RAMP in Osun State, Nigeria, were establishing a dedicated project management unit, strengthening stakeholder coordination mechanisms, building capacity of local government institutions, enhancing budget allocation efficiency, and ensuring transparent and accountable funding, with mean scores ranging from 3.19 to 2.43, while leveraging technology for data-driven decision-making ranked lowest with a mean score of 1.76. The study found a positive and significant correlation ($r = 0.694$, $p < 0.05$) between road infrastructure sustainability and effective implementation strategies of RAMP in Osun State, Nigeria. Effective implementation of rural road projects in Osun State, Nigeria, requires dedicated project management units, effective coordination, and capacity building, respectively. Therefore, policymakers and implementers should prioritize effective engagement and participation in the planning and implementation of rural road projects.

Keywords: *Rural roads construction, effective strategies, residents in Osun State, Nigeria.*

INTRODUCTION

Developing road infrastructure is a key catalyst for economic growth and social equity, especially in rural settings, where it enhances agricultural productivity and alleviates poverty (International Transport Forum Report, 2018). Moreover, improved road connectivity boosts household income, living standards, and access to essential services such as healthcare and education (Minten et al., 2019). Road infrastructure development yields diverse benefits, encompassing economic growth, environmental sustainability, and social cohesion. With careful planning and management, it's possible to minimize adverse environmental effects like deforestation while fostering regional integration, economic collaboration, and social unity, ultimately driving sustainable development and enhancing livelihoods.

The RAMP project seeks to enhance rural mobility and accessibility, especially for farmers who depend on reliable roads for transporting agricultural supplies and produce. By addressing poor road conditions that have stifled economic growth and social welfare, the World Bank and French Development Agency's initiative is poised to positively impact the economies and

livelihoods of residents in beneficiary states, including Osun State, the sole southwest state selected for the project.

Investing in sustainable road infrastructure is vital for ensuring food security, driving economic growth, and promoting sustainable development, as well as improving the quality of essential services (Francis et al., 2025) rendered within the such environment. Rural road development can boost agricultural productivity, generate employment opportunities, alleviate poverty, and enhance livelihoods. Moreover, improved rural transportation infrastructure reduces transportation costs, expands market access, and increases access to essential services, thereby fostering sustainable development and well-being in rural areas (Alhjouj et al., 2022).

Nigeria's rural road network is severely underdeveloped, constraining economic growth and rural access. The prevalence of unpaved roads and bush pathways restricts access to vital services, including markets, healthcare, and education, exacerbating poverty and underdevelopment (Adeniran & Oladun, 2020). Furthermore, poor road infrastructure contributes to substantial post-harvest losses, hindering food security, economic progress, and poverty alleviation efforts (Yeboah, 2015).

The RAMP seeks to enhance rural accessibility and mobility in Osun State, Nigeria, but its success hinges on several factors. Key challenges include the deplorable condition of rural roads, which impede economic growth, market access, healthcare, and education. The inadequacy of road infrastructure exacerbates poverty and underdevelopment, underscoring the need to evaluate RAMP's implementation strategies. Given the existing knowledge gap in assessing RAMP's impact and effectiveness in Osun State, a comprehensive appraisal is necessary to pinpoint areas for improvement.

Objectives of the Study

This study's broad objective evaluates the Rural Access and Mobility Project in Osun State to identify effective strategies for improving rural transportation infrastructure and enhancing community access, while specific objectives are to;

i. determine the perceived strategies for successful implementation of the Rural Access and Mobility Project among residents in Osun State, Nigeria.; and

ii. analyse the link between Rural Access and Mobility Project implementation strategies and the durability of road infrastructure in Osun State, Nigeria.

LITERATURE REVIEW

Sustainable road infrastructure plays a vital role in driving economic growth, promoting social inclusion, and protecting the environment. By connecting people to employment opportunities, healthcare, and education, sustainable roads can help alleviate poverty and support the realization of SDG 1 (No Poverty). Furthermore, environmentally conscious road construction and maintenance can minimize ecological damage, while climate-resilient roads can reduce the risk of disruptions to essential services. Investing in sustainable road infrastructure can thus promote equitable development, reduce poverty, and enhance living standards worldwide (Meyer & Hedden, 2020; Sanni et al., 2024).

Sustainable highways are crucial for achieving SDG 2 (Zero Hunger) by enabling efficient transportation of agricultural products, minimizing post-harvest losses, and boosting food supply. They also improve agricultural productivity, efficiency, and market access, while

supporting sustainable food systems, food aid, and humanitarian efforts. Investing in sustainable roads can provide year-round access to nutritious food, combat hunger and malnutrition, and enhance overall well-being (Yamaguchi et al., 2023; Olaniyan et al., 2025).

Sustainable roads play a vital role in achieving SDG 3 (Good Health and Well-being) by providing safe and reliable access to healthcare services, particularly in rural areas. By cutting travel times and improving emergency care access, sustainable roads can reduce mortality rates and boost health outcomes. They also enable efficient transportation of medical supplies and personnel, ensuring effective healthcare delivery. Furthermore, sustainable roads that encourage walking and cycling can help prevent non-communicable diseases, contributing to improved overall health and well-being (Tešić et al., 2018).

Sustainable roads are essential for achieving SDG 4 (Quality Education) by ensuring safe and reliable access to schools, especially in rural areas. This leads to increased enrolment, lower dropout rates, and streamlined transportation of educational resources and staff. Investing in sustainable roads can enhance access to quality education, skills development, and vocational training, ultimately unlocking human potential and driving economic advancement (Bao, Zhai & Shen, 2022).

Theoretical Framework

Theory of Change (ToC)

The Theory of Change (ToC) approach has undergone significant evolution, shaped by numerous scholars and practitioners over time. Although its precise origins are uncertain, the 1990s marked a key period of development, particularly through the contributions of Caroline Fiennes, James Connell, and Andrea A. Anderson, who helped articulate and popularize the ToC framework for program design and evaluation. Today, ToC is widely utilized in international development, education, healthcare, and social policy to clarify the underlying logic and assumptions of interventions and achieve desired outcomes.

The Theory of Change (ToC) is highly applicable to Rural Access and Mobility (RAM) projects, as it clarifies project objectives and outcomes, maps causal relationships between activities and results, guides project design, strengthens monitoring and evaluation, and fosters stakeholder engagement. By applying ToC to RAM projects, it's possible to enhance effectiveness, sustainability, accountability, and collaboration, ultimately leading to improved road access, increased mobility, and expanded economic opportunities for rural communities.

Road construction encompasses various processes, including paving and maintenance, with asphalt being a widely used material. Developing robust road infrastructure is vital for driving economic growth and facilitating efficient transportation. Effective road construction demands meticulous planning and design. Moreover, proper construction and maintenance are critical for ensuring road safety and minimizing congestion (Changmo *et al.,* 2024).

METHODOLOGY

Research Design

This study employed a concurrent mixed-method research design, combining quantitative and qualitative data collection and analysis in a single study (Sharma *et al.,* 2023). This design is particularly useful for exploring complex research issues, as it allows researchers to gather insights from multiple perspectives and data sources. By integrating quantitative data (often

obtained through questionnaires) with qualitative data (typically collected through in-depth interviews), researchers can gain a more comprehensive understanding of the subject matter.

The mixed-methods approach offers several benefits, including a more complete picture of the research issue, increased confidence in the findings, and the potential for new research directions. By combining open-ended qualitative data with closed-ended quantitative data, researchers can intentionally combine data to provide a more comprehensive understanding of the research problem. This approach enables researchers to tackle complex issues with greater depth and breadth, leveraging the strengths of both qualitative and quantitative methods to gain a richer understanding of the subject matter (Sharma et al., 2023).

Population, Sample Size and Sampling Procedures

The study's target population consisted of rural dwellers residing in villages connected by the RAMP project and RAMP officials in Osun State, Nigeria. Yaro Yamane formular was used to determine the sample frame of four-hundred and fifty (450) out of ten-thousand five-hundred and ninety-six (10,596) residents from the six communities. Iwo, Ife and Ilesha regions were purposively sampled. This was because the RAMP project under consideration focused largely on these three regions within the state. Proportionate stratified and simple random sampling procedures were used to select one-hundred and forty-two (142), one-hundred and thirty-five (135) and one-hundred and seventy-three (173) from Iwo, Ife and Ilesha project regions, respectively. An interview guide was prepared and used for KII.

Instrument, Validity and Reliability

The study employed a self-designed instrument. This instrument comprised demographic, road infrastructure sustainability subscale and effective strategies subscale, respectively. The Likert scale used ranges from strongly agree (SA), agree (A), neutral (N), disagree (D) and strongly disagree (SD). This section of the scale was analysed using frequency and percentage of the respondents that picked each of the scale for each item, while mean and standard deviation were used to determine and rank the items in descending order of magnitude.

The instrument's validity was ensured through face and content validation. The items were presented in clear and straightforward language to ensure understandability. The instrument was reviewed by experts at the Institute of Global Affairs and Sustainable Development (GASDI) at Osun State University, and all suggested corrections and observations were incorporated. The instrument's reliability was tested using Cronbach's Alpha method, with 20 respondents from farming communities outside the study area. The Cronbach's Alpha reliability coefficient produced 0.87 which confirmed its reliability for the study.

Methods of Data Administration and Analysis

The researcher, assisted by four trained research assistants familiar with the study area, administered the instruments. Key Informant Interviews (KII) were also conducted with 15 participants, comprising 4 RAMP officials, 9 rural dwellers, and 2 commercial transporters, with the researcher facilitating the sessions. Data analysis was conducted using SPSS version 26. The mean, standard deviation, and correlation analysis were used for answering all the research questions, while responses from the KII were thematically analysed.

Results

Research Question One: What are the perceived strategies for successful implementation of the Rural Access and Mobility Project among residents in Osun State, Nigeria?

Table 1: Perceived strategies for successful implementation of the Rural Access and Mobility Project among residents in Osun State, Nigeria

Items	Mean ($\bar{x}$)	S. D	Rank
Establish a dedicated project management unit.	3.19	1.07	1st
Strengthen stakeholder coordination mechanisms.	2.78	1.00	2nd
Build capacity of local government institutions.	2.54	1.28	3rd
Enhance budget allocation efficiency.	2.44	1.30	4th
Ensure transparent and accountable funding.	2.43	1.27	5th
Implement efficient project monitoring systems.	2.31	1.34	6th
Support community-based maintenance teams.	2.29	1.52	7th
Conduct thorough community needs assessments.	2.28	1.20	8th
Adopt climate-resilient infrastructure designs.	2.15	1.15	9th
Foster community participation in project planning.	2.13	1.19	10th
Develop maintenance and rehabilitation plans.	2.12	1.278	11th
Conduct thorough environmental impact assessments.	2.06	1.30	12th
Foster public-private partnerships.	1.99	1.26	13th
Establish community-led total sanitation initiatives.	1.96	1.43	14th
Leverage technology for data-driven decision-making	1.76	1.45	15th

Interpretation and Discussion

The empirical results in Table 1 indicated that the establishment of a dedicated project management unit ($\bar{x}$=3.19) ranked first, strengthen stakeholder coordination mechanisms ($\bar{x}$=2.78) ranked second, build capacity of local government institutions ($\bar{x}$=2.54) ranked third, enhance budget allocation efficiency ($\bar{x}$=2.44) ranked forth, ensure transparent and accountable funding ($\bar{x}$=2.43) ranked fifth, implement efficient project monitoring systems ($\bar{x}$=2.31) ranked sixth, support community-based maintenance teams ($\bar{x}$=2.29) ranked seventh, conduct thorough community needs assessments ($\bar{x}$=2.28) ranked eighth, adopt climate-resilient infrastructure designs ($\bar{x}$=2.15) ranked ninth, foster community participation in project planning ($\bar{x}$=2.13) ranked tenth, develop maintenance and rehabilitation plans ($\bar{x}$=2.13) ranked eleventh, conduct thorough environmental impact assessments ($\bar{x}$=2.06) ranked twelfth, foster public-private partnerships ($\bar{x}$=1.99) ranked thirteenth, establish community-led total sanitation

initiatives ($\bar{x}$=1.96) ranked fourteenth, and leverage technology for data-driven decision-making ($\bar{x}$=1.76) ranked fifteenth.

The empirical results suggest that strategies to improve the World Bank Assisted Rural Access and Mobility Project can be categorised into two groups based on a threshold of 2.50. The high-priority strategies include the establishment of a dedicated project management unit, strengthening stakeholder coordination mechanisms, and building capacity of local government institutions. These strategies are considered crucial for project success, focusing on project management, stakeholder coordination, and institutional capacity building.

The lower-priority strategies include enhancing budget allocation efficiency, ensuring transparent and accountable funding, implementing efficient project monitoring systems, supporting community-based maintenance teams, conducting thorough community needs assessments, adopting climate-resilient infrastructure designs, fostering community participation in project planning, developing maintenance and rehabilitation plans, conducting thorough environmental impact assessments, fostering public-private partnerships, establishing community-led total sanitation initiatives, and leveraging technology for data-driven decision-making. The empirical outcomes showed that establishing a dedicated project management unit, with a mean score of 3.19, was ranked as the most important strategy for effective implementation of the World Bank Assisted Rural Access and Mobility Project in Osun State, Nigeria. The ranking of "establishing a dedicated project management unit" as the most important strategy implies that having a specialized team overseeing the project is crucial for its success, and that a lack of dedicated project management may lead to inefficiencies, delays, and ultimately, ineffective implementation of the World Bank Assisted Rural Access and Mobility Project in Osun State, Nigeria.

Strengthening stakeholder coordination mechanisms, with a mean score of 2.78, was ranked as the second most important strategy for effective implementation of the project. The ranking of "strengthening stakeholder coordination mechanisms" as the second most important strategy implies that effective collaboration and communication among stakeholders, including government agencies, local communities, and project partners, is critical to the project's success, and that poor stakeholder coordination may lead to conflicts, delays, and ultimately, compromised project outcomes.

Building the capacity of local government institutions, with a mean score of 2.54, emerged as the third most crucial strategy. The ranking of "building the capacity of local government institutions" as the third most crucial strategy implies that strengthening the skills, knowledge, and resources of local government institutions is essential for effective project implementation, and that inadequate local government capacity may hinder the project's sustainability, scalability, and overall impact.

Enhancing budget allocation efficiency, with a mean score of 2.44, was ranked fourth as a critical strategy for effective implementation of the World Bank Assisted Rural Access and Mobility Project in Osun State, Nigeria. The ranking of enhance budget allocation efficiency as the fourth most critical strategy implies that optimizing budget allocation is essential for the successful implementation of the World Bank Assisted Rural Access and Mobility Project in Osun State, Nigeria, and that inefficiencies in budget allocation may hinder project progress and effectiveness.

The ranking of ensure transparent and accountable funding as the fifth most important strategy implies that openness and accountability in financial management are critical to maintaining

stakeholder trust, preventing corruption, and ensuring that project funds are utilized efficiently and effectively.

The ranking of implement efficient project monitoring systems as the sixth most important strategy implies that regular and effective monitoring of project progress, outcomes, and challenges is essential for timely identification and mitigation of risks, optimization of resources, and ultimate achievement of project goals.

The ranking of support community-based maintenance teams as the seventh most important strategy implies that empowering local communities to take ownership of maintenance and upkeep of project infrastructure is crucial for ensuring sustainability, reducing maintenance costs, and promoting long-term project impact. The ranking of "conduct thorough community needs assessments" as the eighth most important strategy implies that understanding the specific needs, priorities, and concerns of the local community is essential for designing and implementing projects that are relevant, effective, and responsive to community needs, thereby ensuring project acceptance and long-term success.

The ranking of "adopt climate-resilient infrastructure designs" as the ninth most important strategy implies that incorporating climate-resilient design principles into project infrastructure is crucial for ensuring that investments are protected from climate-related risks, such as floods, droughts, and heat waves, and that project benefits are sustained over time. The ranking of "foster community participation in project planning" as the tenth most important strategy implies that involving local communities in the planning process is essential for ensuring that project goals align with community needs, promoting community ownership and buy-in, and ultimately, enhancing project effectiveness and sustainability.

The ranking of "develop maintenance and rehabilitation plans" as the eleventh most important strategy implies that having a proactive plan in place for maintaining and rehabilitating project infrastructure is critical for extending its lifespan, preventing deterioration, and ensuring that project benefits continue to accrue over time. The ranking of "conduct thorough environmental impact assessments" as the twelfth most important strategy implies that carefully evaluating the potential environmental consequences of project activities is essential for minimizing harm to the environment, mitigating risks, and ensuring that project implementation is environmentally sustainable. The ranking of "foster public-private partnerships" as the thirteenth most important strategy implies that collaborating with private sector entities can be beneficial for leveraging resources, expertise, and financing to support project implementation, but may not be as critical as other strategies for achieving project success.

The ranking of establish community-led total sanitation initiatives as the fourteenth most important strategy implies that empowering local communities to take charge of sanitation efforts is a lower-priority but still important strategy for promoting hygiene, improving public health, and enhancing the overall sustainability of project outcomes. The ranking of "leverage technology for data-driven decision-making" as the fifteenth most important strategy implies that utilizing technology to inform project decisions with data-driven insights is considered a lower priority, but still valuable, approach for enhancing project effectiveness, efficiency, and accountability. The empirical results were further corroborated by the RAMP officials interviewed as thus:

> The effective implementation of the World Bank Assisted Rural Access and Mobility Project in Osun State, Nigeria, was achieved through comprehensive approaches that included dedicated project management,

stakeholder coordination, capacity building, and community participation **(Male/RAMP-Official/ Osun/KII/2024).**

Transparent funding, efficient project monitoring, and community-based maintenance, was pivotal in achieving the effective implementation of the World Bank Assisted Rural Access and Mobility Project in Osun State, Nigeria **(Male/RAMP-Official/ Osun/KII/2024).**

Strategies include stakeholder engagement, capacity building, funding optimization, infrastructure maintenance, environmental impact assessments, community participation, monitoring and evaluation, technology integration, collaboration, and sustainability planning to ensure project effectiveness and long-term impact **(Male/RAMP-Official/ Osun/KII/2024).**

Leveraging technology for monitoring and evaluation, fostering community participation, and ensuring effective collaboration among stakeholders would be crucial for project success and sustainability **(Male/RAMP-Official/ Osun/KII/2024).**

The findings indicated that strategies to improve the Rural Access and Mobility Project fall into two categories. High-priority strategies include establishing a dedicated project management unit, strengthening stakeholder coordination, and building local government capacity. These are crucial for project success, focusing on management, coordination, and capacity building. This implies that the rural roads project's success depends strategies comprised dedicated project management, stakeholder coordination, and local government capacity building. Lower-priority strategies include budget allocation efficiency, transparent funding, project monitoring, community-based maintenance, community needs assessments, climate-resilient infrastructure, community participation, maintenance planning, environmental assessments, public-private partnerships, community-led sanitation, and technology-driven decision-making. While important, these are considered secondary to the high-priority initiatives. Olorunfemi (2020) acknowledged that the strategy adopted for the maintenance of rural roads in Ondo State, Nigeria includes provision of free labour by mobilisiing the community members to the project site which is in tandem with the outcome of this research work. Omoregie et al., (2021) corroborated that effective and inclusive communication strategy can go a long way in achieving the objectives of the developmental projects. Aransi (2020) submitted that the involvement of community members in the formulation and implementation phases of the project could serve as a key strategy towards the effective implementation. Similarly, Akinyooye and Aransi, (2020) concurred that proper awareness creation about the developmental projects among the residents always facilitate their involvement and in turn attainment of the projects' goals which aligned with the outcome of this study.

Research Question Two: Is there a significant relationship between Rural Access and Mobility Project implementation strategies and the durability of road infrastructure in Osun State, Nigeria?

Table 2: relationship between Rural Access and Mobility Project implementation strategies and the durability of road infrastructure in Osun State, Nigeria.

Variables	r-value	p-value	Decision

Strategies for effective implementation of RAMP	.694**	.000	Significant

Interpretation and Discussion

Table 2 contained outcomes on the relationship between the sustainability of roads infrastructure and the strategies towards the effective implementation of RAMP in Osun State, Nigeria. The empirical outcomes indicated that there is positive and significant correlation between the sustainability of roads infrastructure and the strategies towards the effective implementation of RAMP (r = .694, *p* 0.000 < 0.05). This is because the probability value of .000 was less than 0.05. Therefore, the null hypothesis which states that there is no significant relationship between the sustainability of roads infrastructure and the strategies towards the effective implementation of RAMP in Osun State, Nigeria is rejected. This is further supported as thus:

> The relationship between sustainability of road infrastructure and effective implementation strategies of RAMP in Osun State, Nigeria, is interdependent. Sustainable road infrastructure requires effective implementation strategies that prioritize maintenance, community engagement, and environmental considerations. Conversely, effective implementation strategies rely on sustainable road infrastructure that supports social and economic development. By integrating sustainability into implementation strategies, RAMP can enhance project longevity, reduce costs, and maximize benefits for local communities. This synergy is crucial for achieving RAMP's objectives and ensuring long-term impact **(Male/RAMP-Official/ Osun/KII/2024)**.

CONCLUDING REMARK

The study concluded that establishing a dedicated project management unit, strengthening stakeholder coordination, and building local government capacity are crucial for effective rural road project implementation. There was a significant positive relationship between road infrastructure sustainability and effective implementation strategies of RAMP in Osun State, Nigeria.

Limitations to the Study

This study has several limitations. Firstly, the focus on Osun State, Nigeria, may limit the generalizability of the findings to other regions or countries. Additionally, the study's reliance on specific research methods and data collection techniques may introduce biases or limitations. The sample size and selection process may also not be representative of the entire population of rural road project stakeholders. The measurement of key variables, such as road infrastructure sustainability and effective implementation strategies, may also be subject to limitations or biases.

Suggestion for Further Study

The following suggestions were raised.

i. Comparative Analysis of RAMP Implementation in Different Local Government Areas of Osun State, Nigeria.

ii. Challenges and Opportunities for Scaling Up RAMP in Regions, Nigeria.

Recommendations

The following recommendations are suggested for concerned stakeholders.

i. Implementers should establish a dedicated project management unit for rural road projects. This unit will oversee project planning, coordination, and execution, ensuring that projects are completed on time, within budget, and to the required quality standards. A dedicated project management unit will also facilitate effective communication among stakeholders and enable swift decision-making.
ii. Implementers should strengthen stakeholder coordination mechanisms to facilitate collaboration and communication among various stakeholders. This will ensure that all parties are aligned with project goals and objectives, and that their needs and concerns are addressed. Effective stakeholder coordination will also help to identify and mitigate potential risks and conflicts.
iii. Implementers should build the capacity of local government institutions to enhance their ability to manage and maintain rural road projects. This will involve providing training and technical assistance to local government officials, as well as supporting the development of institutional systems and processes. By building local capacity, implementers can ensure that projects are sustainable and that benefits are maintained over the long term.
iv. Implementers should enhance budget allocation efficiency to ensure that resources are used effectively and efficiently. This will involve streamlining budgeting processes, reducing bureaucratic delays, and ensuring that funds are allocated to the most critical project components.
v. Government and other stakeholders should invest in capacity building for local government officials and other stakeholders to enhance their ability to manage and maintain road infrastructure.
vi. Policymakers and implementers should prioritize stakeholder engagement and participation in the planning and implementation of RAMP to ensure that projects meet community needs and expectations.

REFERENCES

Adeniran, A. O. & Oladun, E. A. (2020). Implication of Transport Development Models on Agricultural Development in Nigeria: An Empirical Review, *Open Journal of Economics and Commerce*, 3(2); 28-41.

Akinyooye F. E & Aransi, W. O. (2020) Influence of Mass Media on Sustainable Development Goal One Attainment in Osun State, Nigeria. *American Journal of Social Sciences and Humanities,* 5(1): 1-16.

Alhjouj, A. Bonoli, A. and Zamorano, M. A. (2022). Critical Perspective and Inclusive Analysis of Sustainable Road Infrastructure Literature. *Appl. Sci.* 2022, 12, 12996.

Aransi, W. O. (2020) Perceived Challenges and Strategies towards the Attainments of Sustainable Development Goal Three (SDG 3): Evidence from Irewole and Isokan Local Government Areas of Osun State, Nigeria. *Economy,* 7(1): 42-51.

Bao Q., Zhai Z., & Shen Y., (2022). Assessing Road Safety Development in European Countries: A Cross-Year Comparative Analysis of a Safety Performance Index. *Appl. Sci.,* 12, 9813.

Changmo K., Ali Azhar B., John T. H. & Maryam O. (2024) Environmental impacts from traffic on highway construction work zones: Framework and simulations, *International Journal of Sustainable Transportation,* 18:8, 680-694

Francis, U. I., Attih, O. B., & Uford, I. C. (2025). Service Quality and Customer Patronage of United Bank for Africa (UBA) Plc, Aka Road, Uyo, Akwa Ibom State, Nigeria. *Central Asian Journal of Innovations on Tourism Management and Finance*, *6*(3), 826-837.

Meyer J.D., & Hedden, S., (2020). Are we on the right path to achieve the sustainable development goals? *World Development,* 127, 104749.

Olaniyan, O. E., Akinyooye, F. E., Aransi, W. O., & Okafor, E. E. (2025). Effect of Strategic Management on Job Satisfaction Among Selected Local Government Workers in Ibadan, Oyo State, Nigeria*. Journal of Arts, Humanities and Social Science,* 2(1), 121-134.

Olorunfemi, S. O. (2020). An assessment of community participation strategy in the maintenance of rural roads in Idanre local government area of Ondo State, Nigeria, *discovery* 56(294);1-13

Omoregie, C. O., Akinyooye, F. E., & Aransi, W. O. (2021) Communication Strategies and Rural Dwellers Attitude towards Covid-19 Preventive Measures in Osun State, Nigeria. Innovation, 04(64):745-761

Sanni K. T. Osiese M. P. & Aransi W. O. (2024). Assessing Nexus Between Performance Appraisal and Employees' Productivity in Irewole Local Government Area of Osun State, Nigeria*, Lafia Journal of Education (LJE),* 5(1); 106-119.

Sharma, L. R. Bidari, S. Bidari, D. Neupane, S. & Sapkota, R. (2023). Exploring the Mixed Methods Research Design: Types, Purposes, Strengths, Challenges, and Criticisms. *Global Academic Journal of Linguistics and Literature*, 5.1:3-12.

Tešić M., Hermans E., Lipovac K., & Pešić D., (2018). Identifying the most significant indicators of the total road safety performance index. *Accident Analysis and Prevention,* 113, 263–278.

Yamaguchi, N. U., Bernardino, E. G., Ferreira, M. E. C., de Lima, B. P., Pascotini, M. R., & Yamaguchi, M. U. (2023). Sustainable development goals: A bibliometric analysis of literature reviews. *Environmental Science and Pollution Research*, 30(3), 5502–5515.

Yeboah, S. (2015). Influence of Condition of Road Transport Infrastructure on rural Agricultural Development in the Jaman South District. Published Master Thesis Submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology, Ghana.